

NATURAL RESOURCES

Natural Resources is a two semester course that provides students with a background in natural resources. Hands-on learning activities encourage students to investigate areas of environmental concern. Students are introduced to the following areas of natural resources: soils, the water cycle, air quality, outdoor recreation, forestry, rangelands, wetlands, animal wildlife, safety, careers, leadership, and supervised agricultural experience programs.

Course Specifications

- DOE Code: 5180
- Recommended Grade Level: Grade 9-12
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 1 credit per semester, maximum of 2 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- Pathway Assessment: Dual credit course final exam
- This course is aligned with postsecondary courses for Dual Credit
 - Ivy Tech
 - AGRI 115 – Natural Resources Management

Dual Credit

This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in FFA, the CTSO for this area.

Content Standards

Domain - Natural Resource Management

Core Standard 1 Students apply knowledge of natural resource components to the management of natural resource systems.

Standards

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| NR-1.1 | Identify natural resources |
| NR-1.2 | Differentiate between renewable and nonrenewable natural resources |
| NR-1.3 | Research and debate one or more current issues related to the conservation or preservation of natural resources |
| NR-1.4 | Define ecosystem and related terms |
| NR-1.5 | Describe the interdependence of organisms within an ecosystem |
| NR-1.6 | Explain ecosystem dynamics (IvT – AGRI 115) |

- NR-1.7 Demonstrate knowledge of managing various ecosystems (IvT – AGRI 115)
- NR-1.8 Recycling and management of waste in the environment (IvT – AGRI 115)

Domain - Soils

Core Standard 2 Students evaluate various aspects of soil science to understand its' importance to natural resources.

Standards

- NR-2.1 Demonstrate techniques used to identify rock, mineral and soil types
- NR-2.2 Identify land uses, capability factors and land capability classes
- NR-2.3 Explain how the physical qualities of the soil influence the infiltration and percolation of water
- NR-2.4 Discuss how soil drainage and waterholding capacity can be improved
- NR-2.5 Soil conservation management practices (IvT – AGRI 115)

Domain – Water Cycle

Core Standard 3 Students connect the water cycle to natural resources to develop understanding of their habitat.

Standards

- NR-3.1 Describe the world's water supplies and discuss the many uses of water
- NR-3.2 Analyze characteristics of water that influence the biosphere and sustain life
- NR-3.3 Explore the interactions between groundwater and surface water
- NR-3.4 Relate the function of watersheds to natural resources
- NR-3.5 Recognize the management of water as a natural resource (IvT – AGRI 115)

Domain – Air Quality and Pollution

Core Standard 4 Students apply concepts of natural resources to air quality.

Standards

- NR-4.1 Explain how meteorological conditions influence air quality
- NR-4.2 Identify components and structural layers of the earth's atmosphere
- NR-4.3 Identify types of pollution and distinguish between point source and nonpoint source pollution

Domain - Forests

Core Standard 5 Students apply knowledge of natural resources to the production and processing of trees.

Standards

- NR-5.1 Identify characteristics of a healthy forest
- NR-5.2 Analyze ways in which forest stands may be improved
- NR-5.3 Identify trees and other woody plants
- NR-5.4 Describe forest harvesting methods
- NR-5.5 Determine when to harvest forest products.
- NR-5.6 Analyze uses of tree species
- NR-5.7 Understand processing of forest products
- NR-5.8 Describe morphological characteristics used to identify trees and other woody plants

Domain - Wetlands

Core Standard 6 Students apply best management techniques associated with the properties, classifications and functions of wetlands.

Standards

- NR-6.1 Describe the functions of wetlands and differentiate types of wetlands
- NR-6.2 Explain the criteria for classifying wetlands
- NR-6.3 Identify the major types of living organisms that inhabit wetlands

Domain - Animal Wildlife

Core Standard 7 Students apply knowledge of natural resources to formulate a management plan for protecting wildlife.

Standards

- NR-7.1 Explore wildlife species
- NR-7.2 Define characteristics of a healthy wildlife habitat
- NR-7.3 Identify methods of wildlife habitat improvement

Domain – Animal Wildlife Management

Core Standard 8 Students apply knowledge of natural resources to the production and processing of wildlife.

Standards

- NR-8.1 Identify wildlife species that can be sustainably harvested
- NR-8.2 Describe products obtained from wildlife species
- NR-8.3 Differentiate aquatic species harvested for commercial and recreational purposes
- NR-8.4 Compare and contrast uses of aquatic species

Domain - Safety

Core Standard 9 Students develop a safety plan for work and recreation within natural resources.

Standards

- NR-9.1 Demonstrate safety practices when working in an outdoor environment
- NR-9.2 Use proper safety practices/personal protective equipment

Domain – Careers

Core Standard 10 Students examine the scope of career opportunities in and the importance of agriculture to the economy.

Standards

- NR-10.1 Define and explore natural resource agriculture and natural resource agribusiness and their role in the economy
- NR-10.2 Evaluate and explore the natural resource career opportunities in agriculture
- NR-10.3 Identify how key organizational structures and processes affect organizational performance and the quality of products and services
- NR-10.4 Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society

Domain - Leadership

Core Standard 11 Students validate the necessity of leadership skills development in conjunction with participation in The National FFA Organization (FFA) as a critical component to a well rounded agricultural education.

Standards

- NR-11.1 Acquire and demonstrate communication skills such as writing, public speaking, and listening while refining oral, written, and verbal skills
- NR-11.2 Recognize and explain the role of the FFA in the development of leadership, education, employability, communications and human relations skills
- NR-11.3 Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment
- NR-11.4 Acquire the skills necessary to positively influence others
- NR-11.5 Develop a skill set to enhance the positive evolution of the whole person

Domain - Supervised Agriculture Experience

Core Standard 12 Students validate the necessity of a Supervised Agricultural Experience (SAE) program as a critical component to a well rounded agricultural education.

Standards

- NR-12.1 Explain the nature of and become familiar with those terms related to an SAE program
- NR-12.2 Explore the numerous possibilities for an SAE program which a student might develop
- NR-12.3 Develop an individual SAE program and implement record keeping skills